

## CLAIMS

What is claimed is:

1. An exercise machine comprising:

a load;

- 5 first and second force applying members;

a dual sliding pulley assembly connected to said first and second force applying members, said dual sliding pulley assembly including first and second movable pulleys that can be adjusted to a desired position by the user independently of one another;

10 a connecting cable connecting said dual sliding pulley assembly to said load so that use of either one or both of said force applying members lifts said load.

2. The exercise machine of claim 1 wherein said dual sliding pulley assembly further comprises:

15 first and second sliding carriages carrying said first and second movable pulleys respectively;

first and second floating pulleys;

20 a first cable connected at one end to said first sliding carriage and at the opposite end to said first force applying member, said first cable passing around said first movable pulley and said first floating pulley;

a second cable connected at one end to said second sliding carriage and at the opposite end to said second force applying member, said second cable passing around said second movable pulley and said second floating pulley;

a third cable connected at opposite ends to said first and second floating pulleys.

3. The exercise machine of claim 2 further comprising:
- a fourth cable connected at one end to said load;
  - a third floating pulley supported by said third cable and connected to a first end of said connecting cable; and
  - 5 a fourth floating pulley supported by said fourth cable and connected to a second end of said connecting cable.

4. The exercise machine of claim 3 further comprising a third force applying member connected to said fourth cable.

5. The exercise machine of claim 1 wherein said first and second force applying members comprise pull handles.

6. An exercise machine comprising:  
a load;  
a first adjustable force applying member;  
5 a second adjustable force applying member;  
a cable and pulley system connecting said first and second force applying members to  
said load so as to allow a user to independently adjust the position of said first and  
second force applying members to desired positions, said cable and pulley system  
including a shared cable connecting both of said first and second force applying  
10 members to said load so that use of either one or both of said first and second force  
applying members by said user lifts said load.

7. The exercise machine of claim 6 wherein said cable and pulley system includes a dual  
sliding pulley assembly connected to said first and second force applying members, said dual  
15 sliding pulley assembly including first and second movable pulleys that can be adjusted to a  
desired position by the user independently of one another; said shared cable connecting said  
dual sliding pulley assembly to said load so that use of either one or both of said force applying  
members lifts said load.

20 8. The exercise machine of claim 7 wherein said dual sliding pulley assembly further  
comprises:

first and second sliding carriages carrying said first and second movable pulleys  
respectively;  
first and second floating pulleys;

a first cable connected at one end to said first sliding carriage and at the opposite end to said first force applying member, said first cable passing around said first movable pulley and said first floating pulley;

a second cable connected at one end to said second sliding carriage and at the opposite end to said second force applying member, said second cable passing around said second movable pulley and said second floating pulley;

a third cable connected at opposite ends to said first and second floating pulleys.

9. The exercise machine of claim 8 further comprising:

a fourth cable connected at one end to said load;

a third floating pulley supported by said third cable and connected to a first end of said connecting cable; and

a fourth floating pulley supported by said fourth cable and connected to a second end of said connecting cable.

10. The exercise machine of claim 9 further comprising a third force applying member connected to said fourth cable.

11. The exercise machine of claim 7 wherein said first and second force applying members comprise pull handles.

12. An exercise machine comprising:
- a frame structure;
  - a load supported by said frame structure;
  - at least one force applying member;
  - 5 a cable and pulley system connecting said force applying member to said load;
  - a bench to support a user; and
  - an adjustable brace connected to said frame structure and movable between at least first and second positions, said brace functioning as a stop member to prevent said bench from sliding during a first exercise, and functioning as a foot rest for the user during a second exercise.
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13. The exercise machine of claim 1 including at least two independently adjustable force applying members.
14. The exercise machine of claim 13 wherein said cable and pulley system includes a shared cable connecting both of said first and second force applying members to said load so that use of either one or both of said first and second force applying members by said user lifts said load.
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15. The exercise machine of claim 14 wherein said cable and pulley system further includes a dual sliding pulley assembly connected to said first and second force applying members, said dual sliding pulley assembly including first and second movable pulleys that can be adjusted to a desired position by the user independently of one another; said shared cable connecting said dual sliding pulley assembly to said load so that use of either one or both of said force applying members lifts said load.
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16. The exercise machine of claim 15 wherein said dual sliding pulley assembly further comprises:

first and second sliding carriages carrying said first and second movable pulleys

5 respectively;

first and second floating pulleys;

a first cable connected at one end to said first sliding carriage and at the opposite end to said first force applying member, said first cable passing around said first movable pulley and said first floating pulley;

10 a second cable connected at one end to said second sliding carriage and at the opposite end to said second force applying member, said second cable passing around said second movable pulley and said second floating pulley;

a third cable connected at opposite ends to said first and second floating pulleys.

15 17. The exercise machine of claim 16 further comprising:

a fourth cable connected at one end to said load;

a third floating pulley supported by said third cable and connected to a first end of said connecting cable; and

20 a fourth floating pulley supported by said fourth cable and connected to a second end of said connecting cable.

18. The exercise machine of claim 17 further comprising a third force applying member connected to said fourth cable.

25 19. The exercise machine of claim 12 wherein said first and second force applying members comprise pull handles.